HEALTH POLICY PERSPECTIVES

Occupational Therapy’s Role in Preventing Acute Readmissions

Pamela S. Roberts, Marla R. Robinson

The Patient Protection and Affordable Care Act of 2010 (ACA; Pub. L. No. 111–148) is designed to change the way health care services are delivered and reimbursed in the United States. Health care reform efforts stemming from the ACA will result in critical changes for providers and consumers of care. The ACA provides opportunities to examine and act on critical points of weakness in the health care system. One of those points of weakness is the high rate of readmissions to acute care. In this article we discuss the issues around this problem and suggest ways occupational therapy could serve the systemic goal of preventing these occurrences.

Hospital Readmissions and Occupational Therapy’s Role

Of patients that are discharged from hospitals, 19.4% will be readmitted within 30 days and 51.6% within 1 year (Centers for Medicare and Medicaid Services [CMS], 2012b). Postacute care also has a problem with returning patients to acute care facilities; the Post Acute Care Payment Reform Demonstration Final Report (Gage et al., 2012) provides insight into readmissions to acute care from post-acute levels of care in the Medicare program (see also Agency for Healthcare Research and Quality [AHRQ], 2009; Steinberg, Kivlahan, Dobson, & DaVanzo, 2012). The Gage et al. (2012) report showed readmissions to be 19.2% overall: 17.4% for inpatient rehabilitation hospitals and units, 21.1% for long-term care hospitals, 20.2% for home health agencies, and 19.8% for skilled nursing facilities using 2008 data. Jencks, Williams, and Coleman (2009) showed that among Medicare beneficiaries, the 30-day readmission rate to acute care hospitals is nearly 20%. Most current acute care readmission risk prediction models that were designed for either comparative or clinical purposes perform poorly (Gage et al., 2012; U.S. Department of Health and Human Services [HHS], 2011). These figures exemplify the failure in coordinating and managing care between the acute care setting and other settings.

Hospital readmissions have become recognized as an emerging concern in various populations. CMS has indicated that a quality measure for acute hospitals will involve a 30-day comprehensive all-cause risk standardized readmission measure (HHS, 2011). Therefore, examining the predictors of readmission is an important challenge if hospitals are not to be penalized for returning patients. Addressing inappropriate readmission circumstances and processes that contribute to risk factors, detecting meaningful changes to have positive outcomes, and accurately attributing improvements to inform care are of importance. Of critical interest is that an acute care readmission places a financial burden on the Medicare system as well as personal burden on patients and their families. Early identification and engagement of patients with conditions or circumstances that place them at high risk for readmission, combined with risk-reduction strategies, have potential for a positive health care impact. Occupational therapy has a distinct role and value in these efforts.
Financial penalties are assessed on hospitals with readmission rates higher than the national averages. According to CMS, these penalties range from 0.1% to 1% of the diagnostic-related group (DRG) payment rate and will increase to 3% by 2015. These penalties are indexed for performance based on a rolling 3-yr average, which means that poor performance will affect the institution over a long period. Between 2007 and 2011, the 30-day, all-cause hospital readmission rate among Medicare beneficiaries remained stable at 19%. Medicare then identified readmission measures for acute myocardial infarction, heart failure, and pneumonia (Dharmarajan et al., 2013). After the implementation of the readmission penalties, the monthly readmission rate dropped to an average of 18.4% in 2012 (Dharmarajan et al., 2013). This reduction translates to approximately 70,000 fewer readmissions during 2012. CMS is adding the DRGs of total knee arthroplasty, total hip arthroplasty, and acute exacerbation of chronic obstructive pulmonary disease in 2015; therefore, the penalties for hospitals will increase.

How did the successful hospitals address their problems with readmission? Hospital readmissions account for billions of dollars in annual Medicare spending (Steinberg et al., 2012) and place patients at additional risk of hospital-acquired infections and complications. Readmissions also disrupt patient and caregiver routines. Some readmissions are unavoidable, but studies show that they may also result from poor quality of care, inadequate coordination of care, and lack of effective discharge planning and transitional care (Goldfield et al., 2008; Horwitz et al., 2011). In our observations in our own settings, we have seen that more beneficiaries are receiving postdischarge care through observational stays, emergency room visits, and other noninpatient settings when they really might need full acute care. Although an admission does not result, this type of care does not appear to achieve material improvements in the quality of care. We must not prevent readmissions just to prevent readmissions; we must prevent readmissions because this will improve outcomes, improve quality of care, and improve lives.

Under the ACA and in ongoing health system change, the focus on quality, efficiencies, and change models of service delivery will spread accountability throughout the health care system (Lowell & Bertko, 2010; Rosenbaum, 2011). All providers, including occupational therapists, will be held accountable for providing high-quality, patient-centered, evidence-based care at reduced cost.

Occupational therapy provides services to a variety of populations across the continuum of care to enable people of all ages to live life to its fullest. This continuum of care is accomplished through the promotion of health and minimizing the functional effects of illness, injury, and disability. The core of occupational therapy is very much linked to the underpinnings of the ACA. At the provider level, occupational therapy practitioners must be able to understand and implement programs of care that are efficient in use of resources, effective, and able to achieve meaningful health and social outcomes.

Knowledge of existing effectiveness standards is critical. For example, a cost-saving element is preventing readmission after any episode of care. Occupational therapists are skilled in evaluating all factors in a person’s life, which leads to a comprehensive link between occupation and health (Metzler, Hartmann, & Lowenthal, 2012) and logically includes the issues that may lead to readmission.

Occupational therapy practitioners could play a vital role in transforming health care in acute and postacute settings to look more broadly at the context and other factors that affect health, especially integration of daily habits and routines improving function and safety of patients as they return home. These factors—such as enabling self-management and ensuring that appropriate medication management and activities of daily living (ADLs) such as cooking and eating are addressed—can be handled by occupational therapy, and they can have a direct effect on readmissions (Gulley, Rasch, & Chan, 2011). Thus, occupational therapy can add value by encouraging attention to the broader issues of how persons survive when they leave the hospital setting.

Hospital Acquired Conditions: Occupational Therapy Role

CMS has identified 10 hospital-acquired conditions (HACs) that are considered controllable and thus, if they occur, will affect reimbursement and hospital readmission (CMS, 2012a). They include foreign body retained after surgery, air embolism, blood incompatibility, injuries from falls and immobility, pressure ulcers, deep venous thrombosis (DVT), pulmonary embolism (PE), manifestations of poor glycemic control, surgical site infections, venous thromboembolism (VTE), catheter-associated urinary tract infections, and central line associated blood stream infections (CMS, 2012a).

Occupational therapy personnel can positively affect half of the identified HACs through their interventions: injuries from falls and immobility, pressure ulcers, DVT–PE, poor glycemic control, and VTE.

Falls

Inpatient fall rates range from 1.7 to 25 falls per 1,000 patient days, and extrapolated hospital fall statistics indicate that the risk of a patient falling in the acute care setting is approximately 1.9%–3% of all hospitalizations (Dykes et al., 2010). Dykes et al. also reported that fall rates are higher in geriatric and general medical units than in surgical units. It should be considered that this increased rate may in part be because of more consistent referrals for occupational therapy for patients’ postsurgical intervention, which then results in fewer falls. Research could analyze hospital records of surgical patients and others to identify fall occurrence differences between those who have an occupational therapy intervention and those who do not. Hospitalization increases fall risk because of the unfamiliar environment and the effects of illnesses and treatments, such as weakness, dizziness, and medication side effects.

Patient falls and fall-related injuries are devastating to patients, clinicians, and the health care system. Not only are the acute impacts of a fall major but also a single fall may result in a fear of falling and begin a downward spiral of reduced mobility, leading to loss of function and greater risk of falls. In addition, older adults are, in general, at increased risk of falls and are more likely to be injured from a fall. Falls are the leading cause of injuries sustained in the hospital and result in an average of 12.3 additional hospital days and a 61% increase in patient care costs. Studies show that 30%–45% of falls are...
related to toileting with patients falling on
the way from the bed or chair to the bath-
room (Degelau et al., 2012; Tzeng, 2010).

Occupational therapists are trained to
assess and provide interventions to minimize
risks for falls in all practice settings. Inter-
ventions include administration of standard-
ized balance, cognitive and visual assessments,
early mobilization of patients to minimize
the effect of immobility and prolonged bed
rest, self-care training, balance training, envi-
ronmental modification, exercise, and safety
education during daily routines and activities
(Leland, Elliott, O’Malley, & Murphy, 2012).
In addition, participation on fall prevention
committes in organizations and providing
community education regarding fall pre-
vention can increase awareness and mini-
mize the risk of falls in all settings.

Occupational therapy is a covered
Medicare intervention that can be provided
to assess fall risk as part of an occupational
therapy intervention. Other ways that oc-
upational therapy can address falls in a
Medicare-covered Part B visit, a home
health visit, or in a nursing facility can be
found in the American Occupational

Pressure Ulcers
Pressure ulcers affect an estimated 3 million
adults in the United States, with an incidence
ranging from 0.4%–38% in acute care hospi-
tals, 2%–24% in long-term nursing facili-
ties, and 0%–17% in the home care setting
with the national average reported to be be-
tween 7% and 10% (Russo, Steiner, &
Spector, 2008). The length of hospitaliza-
tions for pressure ulcers is 3 times longer
than hospitalizations without a diagnosis of
pressure ulcers (Russo et al., 2008). Data on
the cost of treatment of a pressure ulcer vary,
but some estimates range between $37,800
and $70,000, with total annual costs in the
United States as high as $11 billion (Reddy,
Gill, & Rochon, 2006).

Pressure ulcers are caused by long
periods of uninterrupted pressure exerted
on the skin, soft tissue, muscle, and bone,
which leads to the development of localized
ischemia, tissue anoxia, and inflammation
with eventual tissue necrosis. Many iden-
tified factors contribute to the risk of de-
veloping pressure ulcers, including tissue
circulation, patient age, mobility impairment,
and urinary incontinence. The impact of
pressure ulcers on patients is consider-
able. Pressure ulcers are painful and can
impede a patient’s ability to return to full
functioning.

Occupational therapy practitioners
possess the skills to appropriately intervene
with patients in all practice settings to reduce
the risk for developing a pressure ulcer and to
mitigate the long-term effect pressure ulcers
may have on the ability to fully participate in
identified life roles. Positioning, early mobi-
lization, and education for patients, care-
givers, and other medical staff from the
operating room to long-term care facilities are
roles occupational therapy practitioners can
play. Occupational therapists should partici-
pate in institutional skin care teams to provide
information on best practice and share their
unique perspective to minimize the risk to all
patients and prevent complications related to
pressure ulcer development to reduce the need
for hospital readmission.

Deep Venous Thrombosis, Pulmonary
Emboli, Venous Thromboembolism
Each year an estimated 300,000 to 600,000
individuals in the United States develop a
DVT–PE (also known as VTE); the rate for
people age 80 yr and older is significantly
higher (Beckman, Hooper, Critchley, &
Ortl, 2010). Beckman et al. (2010) re-
ported that 60,000–100,000 individuals in the
United States die of DVT–PE (VTE) each year and that 10%–30% of them die
within 1 month of diagnosis. Among people
who have had a VTE, one-half will experi-
ce long-term complications known as
postthrombotic syndrome, which includes
swelling, pain, discoloration, and scaling in
the affected limb. Almost all hospitalized
patients are at risk for VTE resulting in an
increased risk of morbidity and mortality.
The interventions to minimize the risk
for VTE are multimodal and include phar-
macologic management, mechanical inter-
ventions such as compression stockings and
pumps, and early mobilization and hydra-
tion (AHQR, 2010). Patients need to be-
come active in some way very early in their
hospitalization; occupational therapy can
promote activity and mobility based on oc-
cupational interests. Further, when impair-
ments exist occupational therapy should be
involved to intervene with self-care and
functional mobility training. Through ear-
lier intervention in getting the patient to
move and perform self-care and other ac-
tivities, the risk for developing VTE can
be minimized, thereby reducing additional
complications that may place an individual
at risk for hospital readmission.

Diabetes and Glycemic Control
Diabetes affects more than 20 million indi-
viduals in the United States and is estimated to
account for 22% of all hospital inpatient days.
Poorly controlled glucose is associated with
increased morbidity, mortality, costs, and
length of stay among hospitalized patients.
The total estimated cost of diagnosed diabetes
in 2012 was $245 billion, including $176
billion in direct medical costs and $69 billion
in reduced productivity (American Diabetes
Association, 2013). Inpatient hospital care
accounts for 43% of the total medical cost.
Occupational therapy can assist with the
nonpharmacological management of di-
betes, such as helping individuals under-
stand the importance of adherence to
prescribed diets and medications, including
assisting with minimizing barriers in the
community, activity participation and rou-
tines, stress management techniques, healthy
coping strategies, blood sugar monitor-
ing, hygiene and foot care, and meal
planning and preparation. Occupational
therapy practitioners can also train pa-
tients with diabetes to use compensatory
strategies for sensory, visual, or motor defi-
cits that may interfere with their daily roles
and activities (Sokol-McKay, 2011). All
of these interventions support promoting
healthy routines and the ability to participate
in productive roles while preventing the need
for hospitalization and rehospitalization.

Occupational Therapy in
Care Coordination
The broad range of factors contributing to
prolonged hospitalization and hospital
readmission may reflect what Dharmarajan
et al. (2013) called post-hospitalization syn-
drome, defined as “a generalized vulnerability
to illness among recently discharged patients,
many of whom have developed new im-
pairments during and after hospitalization”
(p. 360). These patients experience new evi-
dence of weakness, mobility impairments,
and mental stress contributing to decreased independence with ADLs. Coordination of care to enhance patient transitions between levels of care is an important focus for all practitioners to minimize the post-hospitalization syndrome while working to prevent hospital readmission. Initiatives include working collaboratively with the multidisciplinary teams to positively affect the quality of care during the acute admission; improve the communication with patients, caregivers, and clinicians; and provide individualized patient education and predischarge assessment to minimize the risk for readmission.

Another possible initiative to test is whether postdischarge interventions, such as the provision of occupational therapy in the home, could be useful in preventing readmission. Coordination of care after discharge has been positively correlated with reducing the 30-day readmission rate by as much as 20%–40% (Horwitz et al., 2011). These initiatives should not only occur in acute care settings but also in all practice settings, for example, inpatient rehabilitation and skilled nursing facilities when the patient is returning home.

**Functional Level**

Functional status has been found to affect readmissions. DePalma et al. (2013) reported that unmet ADL and IADL needs and transitions involving coping with functional disability without adequate help are correlated with an increased incidence of readmission. Those individuals with unmet ADL needs were more likely to be readmitted within a year, and 1 in 4 Medicare patients return home with unmet ADL needs. This finding is further supported by Arbaje et al. (2008), who found that patients with two hospitalizations within 60 days had reported at least one unmet ADL or IADL need prior to the first hospitalization. In addition, Weier et al. (2010) reported that only 4% of patients went home with home care services and that the absence of home care services increases readmission to hospital. Most postdischarge or transitional care focuses on medical management with few assessing functional needs (Naylor, Aiken, Kurtzman, Olds, & Hirschman, 2011).

Further, lower functional status has been shown to be associated with readmissions in a comprehensive integrated inpatient rehabilitation program (Hoyer et al., 2013), in older patients (Hammond et al., 2013), patients with burn injuries (Schneider et al., 2012), and in the stroke population (Roberts et al., 2013). Functional needs, including ADLs, sleep routines, and integration of medication management into daily routines, should be carefully assessed before and after discharge to support individuals in their current environments.

**Occupational Therapy Roles in Preventing Readmission**

Occupational therapy practitioners are well positioned in their roles and with their scope of practice to positively affect the clinical outcomes for patients at risk for readmission to hospital in all practice settings. From early mobility programs (which include cognitive assessment and retraining, and engaging patients in functionally meaningful activities) to working with patients along the continuum of care and back into the community, occupational therapists work to minimize the need for readmission to hospital while optimizing patients’ ability to interact as safely and independently as possible within their own environment. Occupational therapy personnel can participate in leadership roles on hospital-based readmission task forces, fall prevention committees, and skin care teams, and they can play a vital role in coordinating care and discharge planning with the interdisciplinary team. In doing so, occupational therapists are able to identify barriers in discharge planning, including evaluating components such as health literacy, visual deficits, and cognitive impairments to assist the interdisciplinary team to understand the impact for carryover of education and information and integration into daily routines.

Self-management is a key element in successful postacute care, and occupational therapists are experts in motivation, task analysis, and psychosocial contexts, which all contribute to enabling positive outcomes. Roles are emerging for occupational therapy even in primary care to evaluate how patients are functioning in a close interface with their primary care providers. Regardless of specific diagnosis or condition, occupational therapy practitioners offer strategies for patients to manage daily activities while reducing the risk of injury or further decline (Goldberg, 2009; Ryan, 2006). Occupational therapists can identify opportunities for intervention in all areas of occupational performance, including medication management, fall risk prevention, self-care, self-management strategies, home safety, and safety with mobility.

Finally, consistent use of best practice through outcome measures to objectively assess and communicate patient progress and the impact of occupational therapy interventions is needed. In addition, the development of research projects to support occupational therapy interventions and the critical role occupational therapy practitioners play in preventing hospital readmission is necessary and can be a gateway to expanding the use of and understanding of the valuable contributions to outcomes, efficiency, and health that occupational therapy can make.

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